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Now there are seven of those substances, which from their containing oxygen, are called supporters of combustion; and these are oxygen gas, atmospheric air, nitrous oxyd, nitric oxyd, nitric acid, oxyginized muriatic acid, and hyperoxyginized acid, (the nature of which substances we shall endeavour to explain in a future number, under the general term Gas.) From what has been said, it follows, that with a given combustible, the quickness of the decomposition is in proportion to the supply of oxygen, which shows the reason why a fire is increased by blowing common air upon it, and much more by blowing upon it oxygen gas. But *cæteris paribus* with different combustibles; the fire is strongest when the combustible body has the srongest attraction for oxygen. The flame of hydrogen gas urged by oxygen gas is reckoned to produce the most intense heat.

With certain combustible bodies, a peculiar process takes place. It is a remarkably slow process of spontaneous combustion. The body, by attracting oxygen from the atmosphere, becomes thereby gently heated, in consequence of which it is capable of uniting with oxygen; a greater decomposition of the latter ensues, more heat is evolved, and thus the process is gradually accelerated, until flame and visible combustion takes place. Such is sometimes the case with hay and many other substances. The well known mixture of iron filings and sulphur moistened with a little water is an instance of this sort; for if this mixture be buried a little below the surface of the earth, it will of itself, after the lapse of several hours, burst forth into a state of ignition. This experiment has been generally called the artificial volcano.

Though heat is derived, in combustion, from the oxygen gas, the derivation of light is not so evident. It has been for a long time supposed that this element is also one of the components of oxygen gas; but the observations made respecting the light yielded by several bodies when they are slightly heated, or even spontaneously, and that some of them yield much more light than others, seem to prove that light forms a component principle of most bodies, and that it is evolved from the combustible. It is likely, however, that part of it at least may be derived from oxygen gas. G.

To the Editor of the Belfast Magazine.

SIR,

PRESUMING it may come within the scope of the intended plan of your Magazine to disseminate knowledge of the arts and manufactures, and to encourage inquiries concerning them, and thus draw out information which may be extensively useful, I request to be informed by some one, who may possess the competent knowledge, if any marking-ink has been discovered for linens or calicoes, which will stand the operation of the oxy-muriatic acid, in the new process of bleaching; as the common marking-ink hitherto in use, composed of lunar caustic, [nitrat of silver] dissolved in water, is found not to bear the operation of the new mode, unless the mark be covered with lard, soap, or some oily matter, during the immersion of the piece in the steep, which mode is found very troublesome in practice. I have heard that such a marking-ink as I am inquiring after is in use in Scotland, and to persons acquainted with the modes of bleaching practised in that country, I particularly direct my inquiry.

A LINENDRAPE

To the Editor of the Belfast Magazine,

SIR,

I WILL be much obliged to any of your readers who are conversant with either human or veterinary pathology, if they will inform me, through the medium of your Magazine, if the horse be subject to the disease termed *Aneurism*, independent of external injury, and if so, in what parts of the animal it has been most commonly perceived, and what has been the most successful method of treatment.

Q.

To the Editor of the Belfast Magazine

SIR,

I WISH to be informed by some of your chemical correspondents, why it is that the sun's light has the effect of extinguishing the fires in our chambers. Does the union of the solar light with the air, indispose it to part with its *oxygen*, and why?

I am, Sir, yours, &c. C. D.

BIOGRAPHICAL SKETCHES OF DISTINGUISHED PERSONS.

LIFE OF GENERAL WASHINGTON, BY D. B. WARDEN, SECRETARY TO THE AMERICAN LEGATION, PARIS.

Finis vitæ ejus nobis luctuosus, patriæ tristis, extraneis etiam ignotisque non sine cura fuit.

TACIT. IN AGRIC.

IN delineating the human character, it has been lamented that a warm imagination disregards reality, transforms men into angels, clothed with infallibility, and adorned with every virtue.

Human life is seldom represented in its true colours. The greatest characters are not without failings, which are rarely perceived in the picture of the poet, or in the production of the warm panegyrist: vices are shaded by delicate touches of the pencil, whilst the lustre of certain discriminative traits of character, or the admiration excited by honourable friendship, carefully conceals every forbidding feature. This art is not required in exhibiting the character of the illustrious Washington. Here nature stands forth in her noblest attitude. The eye, filled with admiration, surveys beauties of superior excellence. Each virtue demands its share. Much can the fullness of the heart suggest, but the pen falls from the hand, afraid to injure the original, by an imperfect sketch. Justice demands the pencil of a master. What utterance...What colouring of expression can satisfy a sympathy so keen, and so powerful as that which the death of this illustrious personage has created?

The benefactor of mankind, the deliverer of his country, the first of patriots, equally beloved in private as in public life...Excellence in different shapes crowds into the mind, and delicacy cannot be injured by the fondest oblations of a patriot heart.

Aware of the danger of offending by common-place sentiment, and sensible of the difficulty arising from an attempt at a strongly marked likeness, we shall only aim at a plain statement of facts, which, though fresh in the memory of all, will doubtless interest on this occasion.

GEORGE WASHINGTON was born of respectable parents, in Virginia, on the 22d of February, 1732. A useful domestic education expanded the powers of his mind, while a natural fondness for active life gave strength and vigour to his body; his soul early felt the enthusiasm of virtue, for he was taught morals as he was taught science. An education truly Spartan was his choice and delight. With martial toil, fatigue and danger, he longed to be familiar. Nor was he disappointed. At the age of 17, as a major in the militia, he finds a scene of activity adapted to his genius. On the banks of the Ohio, in 1754, he gained the first breathings of applause. Surrounded by the French and Indians he formed an entrenchment, and unable to sustain the attack, was forced to surrender.

The courage and address which he displayed as aid-de-camp to the unfortunate Braddock, gave no small addition to his fame; he had then reached the rank of Colonel; after the peace of Paris, in 1763, he retired to the shade of private life accompanied with the voice of well-merited applause.

Forgotten or neglected by that country, for which he so bravely fought, he attended to agricultural pursuits until that important era arrived when the authority of England was questioned; when a general indignation against her violent measures roused the colonists to seek redress. Washington again appears on the theatre of public life, and was appointed a delegate to that dignified Congress (assembled in September, 1747)